

### ABSTRACT OF THE DISCLOSURE

A gain control circuit comprises a variable gain circuit having a predetermined gain control range and a control voltage supply circuit for supplying an internal control voltage to the variable gain circuit as a gain control  
5 signal. In this gain control circuit, the control voltage supply circuit generates the internal control voltage in response to an external control voltage as to compensate a linearity of the variable gain circuit to an extent of the external control voltage where the variable gain circuit loses a linearity. This gain control circuit is applied to an AGC circuit of a transmitting stage in a CDMA  
10 type mobile phone.